REMARKS

Claims 1-41 currently appear in this application. The Office Action of January 3, 2006, has been carefully studied. These claims define novel and unobvious subject matter under Sections 102 and 103 of 35 U.S.C., and therefore should be allowed. Applicant respectfully requests favorable reconsideration, entry of the present amendment, and formal allowance of the claims.

Rejections under 35 U.S.C. 112

Claims 13-20, 23-26, 32-34 and 37-41 are rejected under 35 U.S.C. 112, first paragraph, as filing to comply with the enablement requirement. The Examiner's position is that the claims contain subject matter which was not disclosed in the specification in such a way as to enable one skilled in the art to make and/or use the invention.

This rejection is respectfully traversed. The Examples beginning on page 81 document that the compounds of the present invention inhibit the JNK pathway. Applicant has previously submitted references documenting that inhibition of the JNK pathway is useful in treating a variety of diseases. Submitted herewith is a copy of Glicksman et al., *Neurobiolo* 1998, **35**:361-370, showing the correlation of the inhibition of the JNK pathway and the reduction of neuronal death and degeneration *in vivo*.

It is respectfully submitted that it is not necessary to know what diseases are affected by modulating the JNK pathway, as applicant has found that the compounds claimed herein are capable of modulating the JNK pathway, which has been shown to affect a great many diseases. Applicant has provided experimental *in vivo* evidence that the compounds

modulate the JNK pathway. It has been found useful in treating a variety of diseases and conditions to modulate the JNK pathway. Accordingly, it is respectfully submitted that one skilled in the art, reading applicant's disclosure, would readily understand how to practice the invention without **undue** experimentation.

With respect to claims 2 and 13, these two claims have been amended to recite, "wherein one nitrogen atom within said piperidino group forms a bond with the sulfonyl group of formula I, thus providing a sulfonamide."

Claims 2, 3, 13-19, 23-26 and 29-31 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement.

This rejection is respectfully traversed. The specification describes *in vivo* tests conducted with representative sulfonamides claimed herein. It was demonstrated on pages 88 and 89 that the compounds significantly reduced the level of inflammatory cytokines induced by LPS challenge in mice, and protecting cells from death during a stroke event in gerbils. These compounds have also been demonstrated to have considerable activity as inhibitors of JNK2 and JNK3, which are known to be associated with many neuronal and autoimmune conditions and diseases, as well as cardiovascular protection.

The compounds of the present invention were subjected to a total of six different assays, as shown in the specification as filed at pages 81-89, namely:

A JNK2 and JNK3 *in vitro* assay
A sympathetic neuron culture and survival assay
An IL-2 release assay
A c-Jun reporter assay

LPS induced endotoxin shock in mice

Global ischemia in gerbils

In view of the biological data obtained from these assays, there can be no doubt that:

The compounds are JNK inhibitors

The compounds are useful in rescuing neuronal cells from cell death

The compounds are suitable for inhibiting pro-inflammatory IL-2 production

The compounds are suitable for protecting cells from death during a stroke event; and therefore, that the compounds are suitable for treating neuronal disorders, autoimmune diseases, cancer, and cardiovascular diseases in light of the general knowledge concerning g the role of JNK in these disorders.

Claims 1, 3 and 29-31 and 9, 10 and 36 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention, for reasons of record and stated above.

This rejection is respectfully traversed. The claims have now been amended to overcome the indefiniteness rejections. The "W" in claim 9 has been replaced by -w--. Claim 10 has been amended to depend from claim 8 rather than claim 9, thus providing antecedent basis for "H" in the definition of R^6. Claim 9 has been amended to recite $-NHSO_2R^3-$-.

Claims 27-31 have been amended to ensure that compound claims depend from compound claims, and composition

claims depend from composition claims. Claims 1 and 27-28 recite compounds, and claims 2 and 29-31 recite compositions.

Claim 22 has been amended to eliminate multiple dependency.

Claims 1, 3, 5-19, 20-22, 27-31 and 35-41 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The Examiner alleges that the definition of R^1 when R^1 is hydroxyl is not described in the specification for the genus of formula I. This rejection is respectfully traversed. The present amendment cancels "hydroxy" from the definition of R^1.

Claims 5, 6 and 35 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement.

This rejection is respectfully traversed. The amendment to the definition of Ar^2 in which Ar^2 is thioxo-dihydropyridine has been cancelled by the present amendment.

Claims 1-3, 5-10 and 13-41 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

It is respectfully submitted that "compounds" is not indefinite. Claim 1 defines a group of compounds having the formula as shown. This formula embraces many compounds, each of which is described by differing substituents on the sulfonamide moiety. It is respectfully submitted that it would be improper to claim "compound" for claim 1, wherein claim 1 defines a plurality of compounds. It is respectfully submitted that the singular only applies when only one compound is claimed, not a family of compounds. This is made

even more clear by claim 11, which claims a compound according to claim 1 selected from the group consisting of... and then recites a great many compounds. Thus, claim 1 embraces a plurality of compounds, not one compound.

With respect to dependent claims 27-31, it should be noted that each of these claims recites compounds according to claim 1 wherein n is from 1 to 3, or n is 1. As n is not the only variable in the formula, it is respectfully submitted that more than one compound or composition is covered by each of these claims.

For claims 1, 3, 5-10, 20-22, 27-31 and 35-41, "saidpiperidino" has been replaced by -said piperidino--.

For claims 1-3, 5-10, 20-22, 27-31 and 35-41, "with the final proviso that if X is oxygen" and "Y shall not be substituted by a group (C=O)N(R,R') at the α-position of the sulfonamide nitrogen" because Y has been defined as a piperidino moiety.

Claim 9 has been amended to recite n' rather than n^1.

Claims 13-19, 23-26 and 32-34 have been amended to replace "ubsubsti-tuted" by -unsubstituted--.

Election/Restriction

Claim 4 is withdrawn from further consideration as being drawn to a nonelected invention.

Specification

The specification is objected to because it contains an embedded hyperlink and/or other form of browser-executable code.

Applicant respectfully requests clarification as to the location of this alleged hyperlink or browser-executable code.

Double Patenting

Claims 1-3, 5, 6, 13-35 and 37-41 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-19 of copending application No. 10/381,197.

This rejection is respectfully traversed. An election in response to a restriction requirement has been filed in which compounds compositions, process of preparing and methods of use of compounds of formula (I) where Y is a piperidine ring have been elected with traverse. As the present claims are directed to a piperidino ring, it is respectfully submitted that this double patenting rejection is no longer appropriate.

Claims 1-3 and 5-26 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting over copending application No. 10/381,200.

This rejection is respectfully traversed. Application No. 10/381,200 is currently under appeal, and it is not known what scope of claims will eventually be allowed. Therefore, it is respectfully submitted that it is premature to require a terminal disclaimer at this stage of the prosecution.

Claims 1-3 and 5-28 are provisionally rejected under the doctrine of obviousness-type double patenting as being unpatentable over copending application No. 10/381,665.

This rejection is respectfully traversed. As noted in the previous response, application no. 10/381,665 has not

yet been examined. It is respectfully submitted that, despite the provision in MPEP 804 that a provisional rejection can be addressed without waiting for the first patent to issue, this rejection can be repeated.

Therefore, until it is known what claims will issue in the '665 application, it is premature to require a terminal disclaimer.

In view of the above, it is respectfully submitted that the claims are now in condition for allowance, and favorable action thereon is earnestly solicited.

Respectfully submitted,

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